

## WHAT IS CLAIMED IS:

1 1. Apparatus comprising:

2 a substrate;

3 a ground plane on the substrate, the ground plane having  
4 a slot;

5 transmission lines lying over the slot; and

6 data processing agents each connected to one of the  
7 transmission lines.

1 2. The apparatus of claim 1 in which the slot is terminated.

1 3. The apparatus of claim 1 in which the transmission lines  
2 are terminated.

1 4. The apparatus of claim 1 in which the slot functions as a  
2 main bus trunk when excited.

1 5. The apparatus of claim 1 in which the data processing  
2 agents comprise processors.

1 6. The apparatus of claim 1 in which the data processing  
2 agents comprise chipsets.

1 7. The apparatus of claim 1 in which the transmission lines  
2 lie perpendicular to the slot.

1 8. The apparatus of claim 1 in which the data processing  
2 agents comprise signaling circuitry.

1 9. A method comprising:

2 inducing a transient return current on a reference plane  
3 in response to a driving agent sourcing a current onto a first  
4 transmission line, the current being representative of binary  
5 data;

6 propagating energy of the transient return current to a  
7 slot in the reference plane;

8 inducing a transient voltage pulse onto a second  
9 transmission line connected to a receiving agent when the  
10 propagating energy encounters the second transmission line;  
11 and

12 generating a binary digital signal in the receiving agent  
13 from the transient voltage pulse received on the second  
14 transmission line.

15 10. A method comprising:

16 in a bus, sourcing a current being representative of  
17 binary data on to a first line;

18 inducing a return current on a reference plane; and  
19 transferring energy of the return current to a slot in  
20 the reference plane.

21 11. The method of claim 10 further comprising:

22 inducing a voltage pulse on to a second transmission line  
23 from the energy in the slot; and

4 generating a binary digital signal in a receiving agent  
5 from the voltage pulse.

1 12. The method of claim 10 in which sourcing is generated by  
2 a driving agent.

1 13. The method of claim 12 in which the driving agent is a  
2 processor.

1 14. The method of claim 11 in which the receiving agent is a  
2 processor.

1 15. Apparatus comprising:  
2 a substrate;  
3 a ground plane on the substrate, the ground plane having  
4 a slot;  
5 parallel arranged transmission lines lying over the slot;  
6 and  
7 data processing agents each connected to one of the  
8 parallel arranged transmission lines.

1 16. The apparatus of claim 15 in which the slot is  
2 terminated.

1 17. The apparatus of claim 15 in which the parallel  
2 transmission lines are terminated.

1 18. The apparatus of claim 15 in which the slot functions as  
2 a main bus trunk when excited.

1 19. The apparatus of claim 15 in which the data processing  
2 agents comprise processors.

1 20. The apparatus of claim 15 in which the data processing  
2 agents comprise chipsets.

3 21. The apparatus of claim 15 in which the data processing  
4 agents comprise signaling circuitry.

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